

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 91 - 093

WATER RECLAMATION REQUIREMENTS FOR:

NAPA SANITATION DISTRICT,
NAPA-AMERICAN CANYON WASTEWATER MANAGEMENT AUTHORITY, AND NAPA
SANITATION DISTRICT RECLAIMED WATER USERS (DUANE CHAMBERLAIN;
PHYLLIS FIFIELD; EARL HUSTON; CHARDONNAY GOLF CLUB, INC.; ET AL),
IN NAPA COUNTY

The California Regional Water Quality Control Board, San
Francisco Bay Region (hereinafter called the Board) finds that:

1. The Napa Sanitation District (NSD) operates the Napa-American Canyon Joint Wastewater Treatment Plant for the Napa-American Canyon Wastewater Management Authority. This treatment facility consists of the Soscol Oxidation Ponds, a series of four oxidation ponds with 342 acres total surface area, and the Soscol Treatment Plant, a physical-chemical treatment plant with a design treatment capacity of 15.4 million gallons per day (MGD).
2. These facilities provide secondary treatment of combined domestic and industrial wastewater from the City of Napa and adjacent unincorporated areas, including the American Canyon area. The Soscol Oxidation Ponds receive untreated wastewater from part of NSD's service area; and primary-treated wastewater from both NSD's Imola Avenue Treatment Plant, and American Canyon County Water District's oxidation ponds. The Soscol Treatment Plant provides algae solids removal and disinfection by physical-chemical processes for secondary-treated effluent from the Soscol Oxidation Ponds.
3. During the wet weather period of November 1 through April 30, treated, disinfected wastewater is allowed to be discharged to the Napa River. These discharges to the Napa River are presently governed by Waste Discharge Requirements in Order No. 88-094, adopted by the Board on June 15, 1988, which also serves as a permit under the National Pollutant Discharge Elimination System (NPDES No. CA00375475).
4. During the dry weather period of May 1 through October 31, discharge to the Napa River is prohibited, and wastewater is either stored in the Soscol Oxidation Ponds or discharged to land. These discharges to land are presently governed by Water Reclamation Requirements in Order No. 85-100, adopted by the Board on September 18, 1985. Order No 85-100 allows discharges of treated, undisinfected pond effluent to grasslands and non-milking animal pasture lands owned or leased by NSD at Somky Ranch, Kirkland Ranch and the Napa County Airport.

5. The Napa Sanitation District filed a Report of Waste Discharge dated March 1, 1991 for updating Water Reclamation Requirements for NSD's wastewater reclamation project, including golf course and vineyard irrigation, uses which require disinfected reclaimed water.
6. In order to produce reclaimed water acceptable for uses such as golf course and vineyard irrigation, NSD will continue to operate the Soscol Treatment Plant throughout the irrigation season. Thus, reclaimed water distributed to all use areas will be disinfected, secondary-treated effluent from the Soscol Treatment Plant, except for the Napa County Airport and Fagundes Ranch sites as described in Finding 8.(c), below.
7. The titles Producer, User, and Discharger are used throughout this order to identify and delineate which entities are responsible for achieving, maintaining and ensuring compliance with the various requirements of this Order. The Napa Sanitation District is called the Producer of the reclaimed water. The Napa Sanitation District and all other users of the reclaimed water identified in Finding 8 below are collectively called the User. The Producer and User are collectively called the Discharger.
8. The reclaimed water use areas, uses and users are described below. Additional Users may be added to the project in the future, with written authorization of the Board's Executive Officer. Maps showing locations of the use areas listed below are included as Attachment A of this Order.
 - (a) Somky Ranch - A 295 acre site, with 213 irrigable acres, located adjacent to the Soscol Oxidation Ponds, north of the County Airport, and south of Soscol Road. Irrigation is by travelling, large-volume spray 'guns', of non-milking cattle pasture. Reclaimed water is delivered to the site from the Soscol Treatment Plant through a 24-inch pressure line. The site is owned by NSD, and operated under lease from NSD. User: The current leasee and operator is Mr. Duane Chamberlain.
 - (b) Jameson Canyon Reclamation Site - A 745 acre site, with 330 irrigable acres, located east of Highway 29 and north of Highway 12. This site was formerly known as the Kirkland Ranch site. Irrigation is by fixed sprinkler system, of non-milking cattle pasture. The site is owned by NSD, and operated under lease from NSD. User: The site is currently leased and operated by Phyllis Fifield and Earl Huston.

Reclaimed water is delivered to the site by NSD through the 24-inch pressure line from Soscol Treatment Plant which also supplies the Somky Ranch site. Sheehy Creek, a seasonal creek, runs through the site. During the irrigation season, runoff is captured in the creek behind a flashboard structure installed at the culvert where Sheehy Creek passes under North Kelly Road and piped back into the Soscol Oxidation Ponds.

8. (continued)

(c) Napa County Airport and Fagundes Ranch - A 768 acre site with 150 irrigable acres, located around the Napa County Airport, southeast of the Soscol Oxidation Ponds. This site includes the 65-acre Fagundes Ranch site, with 50 irrigable acres, which is located immediately southeast of the Soscol Oxidation Ponds. Fagan Creek, tributary to tidally-influenced Fagan Slough and the Napa River, runs through the site. The Fagundes Ranch site is owned by NSD, whereas the remaining use area is leased by NSD from the County Airport. User: Currently, NSD does not have a leasee for use of this site, and operation of the irrigation system is by NSD staff.

Irrigation is by wheel-line and hand-moveable sprinklers, of open grassland, fodder or fiber crops. Animal grazing on this land is not allowed. Reclaimed water delivered to the site is undisinfected, partially-treated wastewater from Oxidation Pond #2, delivered by a manually-controlled pump and above-ground irrigation pipes. NSD plans to construct a pipeline from the Soscol Treatment Plant to provide disinfected secondary effluent to the site, in the near future.

(d) Chardonnay Golf Course & Vineyards - A 460 acre site, with 320 irrigable acres (200 acres of golfcourse, and 120 acres of vineyards), located east of Highway 29 and south of Highway 12. The site is bordered on the west by South Kelly Road, on the north by NSD property (presently unirrigated) and Highway 12, and on the east and south by open land used primarily for beef cattle grazing. Fagan Creek, which includes some well-developed riparian vegetation and habitat, runs east-west through the golf course. User: The site is owned and operated by Chardonnay Golf Club, Inc. (Chardonnay).

Chardonnay purchases reclaimed water from NSD by contract. The water is metered and delivered to Chardonnay by NSD through a combination of overland and buried pipe, originating from the pressure main at Jameson Canyon Reclamation site. The supply line passes under Highway 12 through a 20-inch culvert, and then South about 1700 feet across NSD and Chardonnay property, to two irrigation water storage ponds (Lake 3 and Lake 5) on the golf course which also serve as golf course 'water hazards'. Lake 5 is connected in parallel to third storage pond, Lake 4. Irrigation water is drawn from Lakes 3 and 4 which each have an irrigation pump station owned and operated by Chardonnay. Storage pond capacities are: Lake 3 = 23.8 acre-feet (AF); Lake 4 = 16.2 AF; and Lake 5 = 22 AF.

The golf course is irrigated by a fixed sprinkler system. Runoff is controlled by using partial-rotation sprinkler heads along Fagan Creek and the property boundaries, and by timed irrigation of discrete areas of the course. Vineyard irrigation is by drip irrigation after passing through a pressure sand filter. Irrigation around the clubhouse is with potable water purchased from the City of Vallejo water supply system.

9. The reclaimed water use areas are tabulated below along with irrigable acreages and estimated use volumes in million gallons per year (MG/Yr).

<u>USE AREA</u>	<u>IRRIGABLE ACREAGE</u>	<u>ESTIMATED USE (MG/Yr)</u>
<u>Pasture Irrigation</u>		
Jameson Canyon Site (NSD owned)	330	296
Somky Ranch (NSD owned)	213	191
Napa Co. Airport (NSD leased)	100	90
Fagundes Ranch (NSD owned)	50	45
Subtotal	693	622
<u>Landscape and Vineyard Irrigation</u>		
Chardonnay Golf Course	200	200
Chardonnay Vineyards	120	11
Subtotal	320	211
Total	1013	833

10. The Producer, as purveyor of the reclaimed water to the use areas, is responsible for the operation and maintenance of the treatment plant and major transmission facilities (pump stations, pipes, etc.), and ensuring that reclaimed water distributed to the use areas is of acceptable quality in compliance with this Order. The User is responsible for ensuring compliance with this Order for all reclaimed water operations and facilities under the User's control.
11. Reclaimed water distributed to several use areas for different uses through a common transmission pipeline(s) is required to be of a quality acceptable for all uses.
12. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on December 17, 1986. The goals to be used in regulating water quality as set forth in the Basin Plan include maximum feasible reclamation or reuse of municipal, industrial and agricultural wastewaters. The Basin Plan also identifies beneficial uses of surface and ground waters in the region to be protected.
13. The beneficial uses identified in the Basin Plan for the Napa River in the vicinity of this project include:
- Fish Spawning and Migration
 - Contact and Non-contact Water Recreation
 - Navigation
 - Warm Fresh Water Habitat
 - Cold Fresh Water Habitat
 - Wildlife Habitat
 - Preservation of Rare and Endangered Species

14. The beneficial uses identified in the Basin Plan for groundwaters in the Napa Valley region include:
 - a. Municipal Supply
 - b. Agricultural Supply
 - c. Industrial Supply
 - d. Industrial Process Water Supply
15. Section 13523 of the California Water Code provides that a Regional Board, after consultation with and reception of recommendations from the State Department of Health Services, and if it determines such action to be necessary to protect the public health, safety or welfare, shall prescribe water reclamation requirements for water which is used or proposed to be used as reclaimed water.
16. These water reclamation requirements are in conformance with the statewide reclamation criteria established by the State Department of Health Services as prescribed in Title 22, Sections 60301 through 60355, California Code of Regulations.
17. The Napa Sanitation District approved an Environmental Impact Report (EIR) for the Napa-American Canyon Wastewater Reuse Program in 1979, and a Negative Declaration for the Kirkland Ranch irrigation project dated September 25, 1984, in accordance with the California Environmental Quality Act (Public Resources Code Section 21000 et seq.). The projects as described in the EIR and Negative Declaration will not have adverse impacts on the environment, with proper implementation of the mitigation measures identified in these documents.
18. The Board has notified the Discharger, and interested agencies and persons of its intent to prescribe water reclamation requirements for the uses listed in Finding 9.
19. The Board, in a public meeting, heard and considered all comments pertaining to this discharge.

IT IS HEREBY ORDERED, pursuant to the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, that the Discharger shall comply with the following:

A. Prohibitions

1. The treatment, storage, distribution or reuse of reclaimed water shall not create a nuisance as defined in Section 13050(m) of the California Water Code.
2. There shall be no bypass or overflow of untreated or partially treated wastewater to waters of the State from the Discharger's collection, treatment, storage or disposal facilities.

3. No reclaimed water shall be allowed to escape from the authorized use area by airborne spray; nor by surface flow except in minor amounts associated with good irrigation practices.
4. The use of reclaimed water shall not cause the degradation of groundwater used for domestic purposes or cause any change in a quality parameter which would make the groundwater unsuitable for irrigation use.
5. The discharge of toxic substances into ponds used for treatment or storage of wastewater which will disturb the normal biological mechanisms of the ponds is prohibited.
6. Reclaimed water shall not be applied to any reclaimed water use area when soils are saturated to the extent that runoff or excessive ponding is likely to occur, during rainfall, or when rainfall is expected to occur within 24 hours.
7. Reclaimed water shall not be sprayed on any walkways, passing vehicles, buildings, domestic water or food handling facilities, or areas not under the direct control of the user.
8. Reclaimed water shall not be used as a domestic or livestock animal water supply.
9. Milking animals are prohibited in reclaimed water use areas.
10. Fodder, fiber and seed crops shall not be harvested when wet from spraying with reclaimed water.
11. Use of undisinfected reclaimed water under this Order shall be limited to irrigation of fodder, fiber and seed crops, and pasturing of non-milking animals only, and shall be confined to areas where public access is restricted.
12. Application of reclaimed water in, on or over any seasonal or permanent wetlands, flowing surface waters, public roadways, houses, barns or wells is prohibited.
13. For the Napa County Airport/Fagundes Ranch site, use of reclaimed water is prohibited within 50 feet of the Fagan Marsh, and within 50 feet along both sides of Fagan Creek.
14. There shall be no irrigation or impoundment of reclaimed water within 100 feet of any well used for domestic or irrigation water supply, unless it can be demonstrated to the Executive Officer's satisfaction that special circumstances justify lesser distances to be acceptable.
15. There shall be no cross-connection between potable water supply and piping containing reclaimed water. Supplementing reclaimed water with domestic supply water shall not be allowed except through an air-gap separation.

B. Reclaimed Water Use Specifications

Producer

1. The Producer shall assure that, except as provided in Specification B.2. below, the reclaimed water is at all times an adequately oxidized, disinfected water which meets the following quality limits prior to being distributed or applied to the reclaimed water use areas:

In any grab or composite sample:

- a. BOD, 5-day, 20°C 30 mg/l, monthly average maximum
 40 mg/l, daily maximum
- b. Suspended Solids 30 mg/l, monthly average maximum
 40 mg/l, daily maximum

In any grab sample:

- c. Dissolved Oxygen 1.0 mg/l minimum
- d. Dissolved Sulfides 0.1 mg/l maximum
- e. At any point downstream of the disinfection facilities where adequate contact with the disinfectant is assured:
 - i. The median number of total coliform organisms shall not exceed 23 MPN/100 ml as determined from the bacteriological results of the last seven days for which analyses have been completed; and
 - ii. The number of total coliform organisms shall not exceed 240 MPN/100 ml in any two consecutive samples.

2. For pond water distributed to the Napa County Airport/Fagundes Ranch site, the Producer shall assure that the reclaimed water is at all times an adequately oxidized water which meets the following quality limits, in any grab sample:

- a. BOD, 5-day, 20°C 40 mg/l, daily maximum
- b. Dissolved Oxygen 2.0 mg/l, minimum
- c. Dissolved Sulfides 0.1 mg/l, maximum

3. The Producer shall discontinue the distribution of reclaimed water to use areas during any period in which the Producer has reason to believe that the limits specified in B.1. and/or B.2. above are not being met. The distribution of reclaimed water shall not be resumed until all conditions which caused the limits specified in B.1. and/or B.2. above to be violated have been corrected.

User

4. The User is responsible for ensuring compliance with the requirements of this Order for all reclaimed water operations and facilities under the User's control. The User's reclaimed water facilities shall be operated, maintained and repaired in accord with the conditions of this Order, in order to prevent public health hazards, pollution or nuisance conditions. A User Supervisor responsible for ensuring compliance with this Order should be appointed at each reclaimed water use area.
5. The User shall manage reclaimed water uses so as to prevent ponding or saturated conditions which could provide breeding conditions for mosquitoes or other vectors of public health significance, and to prevent odors or nuisance conditions.
6. Irrigation of the golf course, or any other areas with similar public exposure, shall occur only during nights, early morning hours or daytimes, when members of the public are absent and wind velocity is minimal. Any exceptions to this specification must be approved in writing by the Executive Officer.
7. Following irrigation, golf course grounds and other areas with similar public exposure should have maximum opportunity to dry before being used by the public.
8. The User shall provide adequate means of notification to inform the public that reclaimed water is being used. Conspicuous warning signs shall be posted at adequate intervals around the reclaimed water use area and reclaimed water storage ponds informing the public that the water is not safe for drinking or contact. Signs shall be of sufficient size and proper wording in order to be clearly read.
9. Golf course score cards shall be printed or stamped with notices stating that reclaimed water is used for irrigation.
10. Vineyard irrigation shall be suspended at least 15 days prior to harvesting, in order to allow the soils to dry and to prevent harvest workers from contacting reclaimed water.
11. Any grapes which come into contact with reclaimed water shall be removed from the harvestable crop used for wine production.

Ponds (Producer and User)

12. Water at the surface of any pond containing wastewater or reclaimed water shall meet the following quality limits at all times, in any grab sample:
 - a. Dissolved Oxygen 2.0 mg/l, minimum
 - b. Dissolved Sulfide 0.1 mg/l, maximum
 - c. pH 6.0, minimum; 9.0, maximum.

13. In order to prevent the threat of overflows, a minimum freeboard of two (2) feet shall be maintained at all times in any pond containing wastewater or reclaimed water, except during extreme rainfall events, or with prior written authorization by the Board's Executive Officer.
14. All ponds shall be adequately protected from erosion, washout and flooding from a rainfall event having a predicted frequency of once in 100 years.

Reclaimed Water System (Producer and User)

15. All drinking water facilities and domestic water supply well-heads within 500 feet of any reclaimed water use area shall be protected from direct or wind-blown reclaimed water spray.
16. All domestic (potable) water service connections to reclaimed water use areas shall be equipped with an air-gap separation. A Reduced Pressure Principle Backflow Prevention Device may be provided in lieu of an Air-gap Separation, if approved by the California State Department of Health Services and the water supplier.
17. Vineyard drip irrigation system emitters shall be installed close to the ground and in a way that minimizes the possibility of fruit being sprayed with reclaimed water if emitters become plugged, broken or removed. The drip irrigation lines and emitters shall be periodically inspected to ensure proper operation and compliance with this specification.
18. The downslope perimeters and drainage swales of reclaimed water use areas shall be bermed or equipped with a tail-water (irrigation runoff) collection system to prevent off-site runoff of reclaimed water.
19. There shall be at least a ten-foot horizontal and a one-foot vertical separation between all pipelines transporting reclaimed water and those transporting domestic supply water, with domestic water pipelines above reclaimed water pipelines.
20. All equipment, including pumps, piping, valves, etc. with public access which may at any time contain reclaimed water shall be adequately and clearly identified with warning signs and the Discharger shall make all necessary provisions, in addition, to inform the public that the liquid contained is reclaimed water which is unfit for human consumption.

General (Producer and User)

21. The Discharger shall maintain in good working order and operate, as efficiently as possible, any facility, equipment or control system installed, or as modified, to achieve compliance with this Order.

22. The Discharger should provide inspections of use areas, and supervision and training for User staff in order to assure proper operation of the reclamation facilities and to provide proper worker protection. Records of inspections and trainings should be maintained by the Discharger.

C. Provisions


1. The Producer and User shall comply with all applicable sections of this Order immediately upon adoption by the Board.
2. The Producer and User shall comply with the Self-Monitoring Program as adopted by the Board and as may be amended by the Board's Executive Officer.
3. The use of reclaimed water under this Order shall be limited to the Users and uses identified in Findings 8 and 9 of this Order, and additional Users and uses for which written authorization has been obtained by the Producer from the Board's Executive Officer.
4. The Producer shall develop a contingency plan outlining the actions to be taken by the Producer and/or User in the event effluent quality fails to meet the requirements of this Order. A copy of this plan shall be submitted to the Board within 120 days of adoption of this Order. Each year, prior to the irrigation season, this plan shall be reviewed and, as necessary, updated. Any revisions shall be submitted to the Board.
5. In the event that either the Producer or User is unable to comply with any of the conditions of this Order due to:
 - a. Breakdown of transmission or treatment equipment;
 - b. Accidents caused by human error or negligence; or
 - c. Other causes such as acts of nature,

the Producer or User (or agents) shall notify the Board by telephone as soon as they have knowledge of the incident. Written notification of such incidents shall be submitted by the Producer within two weeks of the incident, unless directed otherwise by Board staff. Written notice shall include pertinent information explaining the reasons for the non-compliance, and what steps were taken or are planned in order to correct the problem and prevent the problem from recurring.

6. The Producer or User shall permit the Board or its authorized representatives, in accordance with California Water Code Section 13267 (c):
 - a. Entry upon premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order;
 - b. Inspection at reasonable times of any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order;

- c. Access to and copy of, at reasonable times, any records that must be kept under the conditions of this Order; and
 - d. To photograph, sample and monitor at reasonable times, for the purpose of assuring compliance with this Order.
7. In the event of any change in control or ownership of land or water reclamation facilities governed by this Order, the Producer shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to this Board.
8. The Producer shall file with the Board a report of waste discharge at least 180 days before making any material change in the character, location or volume of the reuse, except for emergency conditions in which case the Board shall be notified as soon as possible.
9. This Order is subject to review and updating by the Board, as necessary to comply with changing State and Federal laws, regulations, policies, or guidelines; changes in the Board's Basin Plan; or changes in the discharge characteristics. This Order will be reviewed to determine the need for updating no more than five years from the date of adoption.
10. After notice and opportunity for a hearing, this Order may be terminated or modified for cause including, but not limited to:
- a. Violation of any term or condition of this Order;
 - b. Obtaining the Order by misrepresentation, or failure to disclose fully all relevant facts;
 - c. A change in any condition that requires either a temporary or permanent change in the authorized reuse; or
 - d. Endangerment to public health or environment that can only be regulated to acceptable levels by modification or termination of this Order.
11. The Water Reclamation Requirements prescribed by this Order supercede the requirements prescribed by Order No. 85-100. Order No. 85-100 is hereby rescinded.

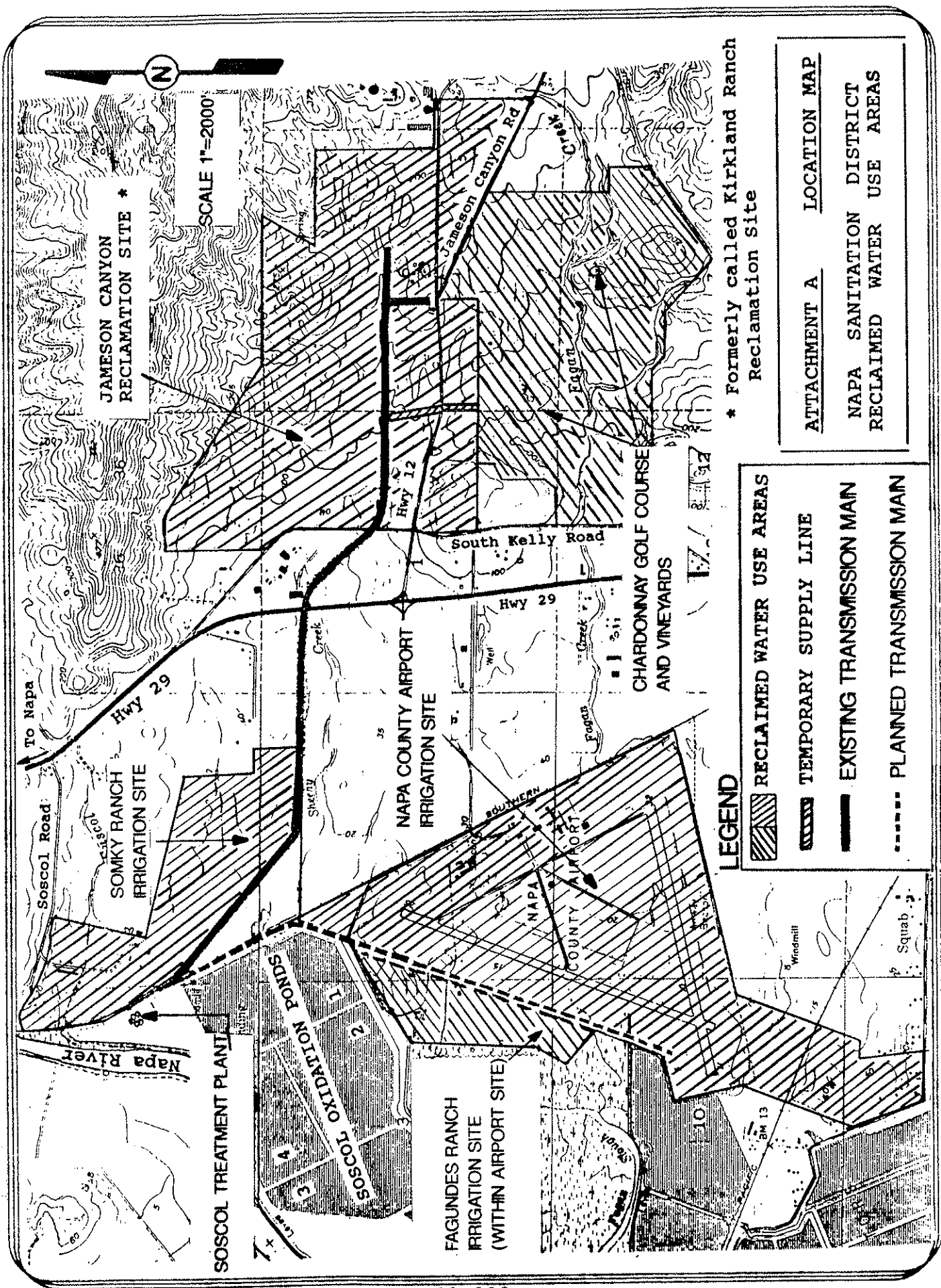
I, Steven R. Ritchie, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on June 17, 1991.

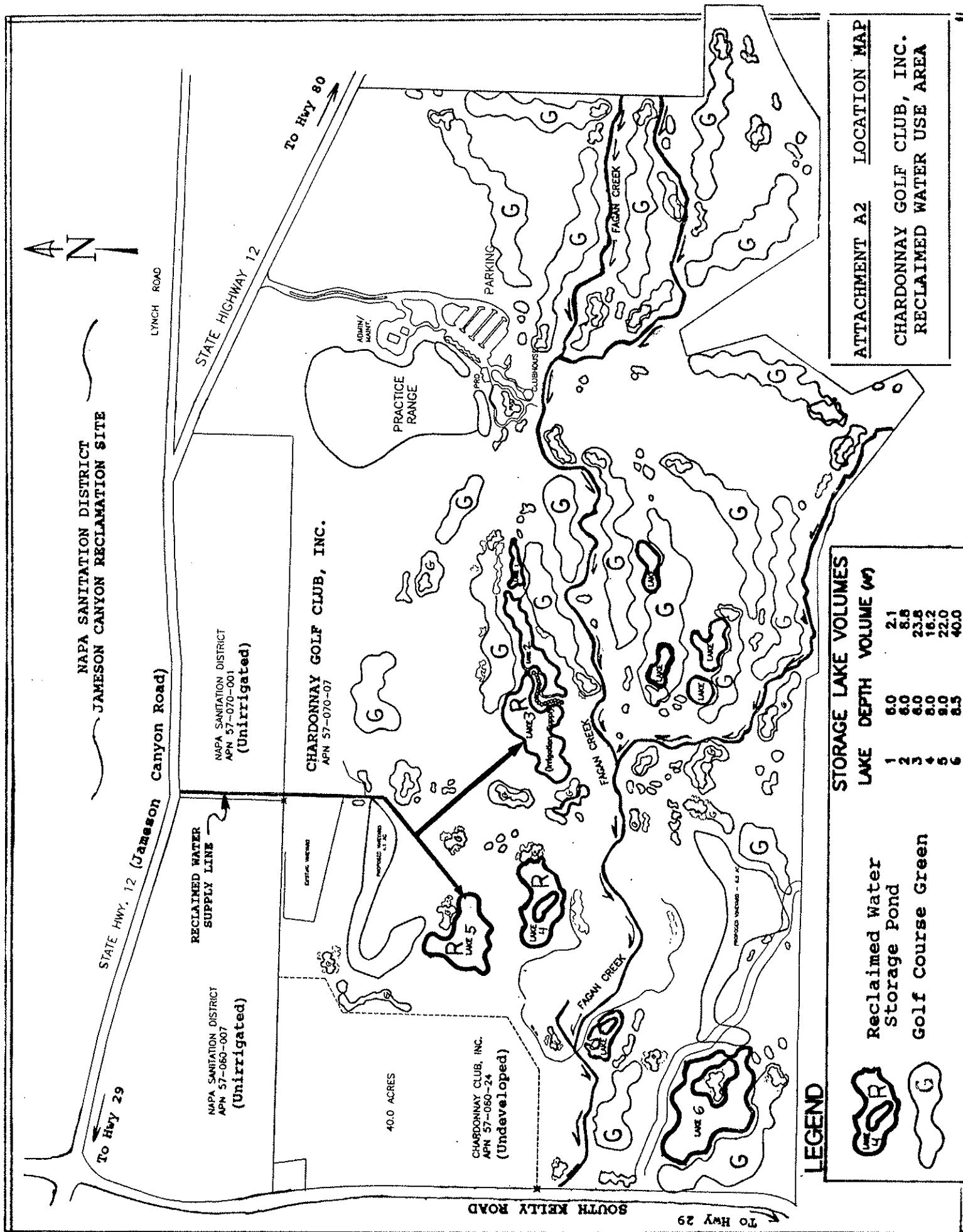

STEVEN R. RITCHIE
Executive Officer

Attachments:

- A. Location Maps: Reclaimed Water Use Areas
Self-Monitoring Program

[File No. 2139.3009] [Originator/BDA] [Reviewer/RJC]





ATTACHMENT A2 LOCATION MAP
 CHARDONNAY GOLF CLUB, INC.
 RECLAIMED WATER USE AREA

STORAGE LAKE VOLUMES

LAKE	DEPTH	VOLUME (M)
1	6.0	2.1
2	6.0	8.8
3	6.0	23.8
4	8.0	16.2
5	8.0	22.0
6	8.5	40.0

LEGEND

Reclaimed Water
Storage Pond

Golf Course Green

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

NAPA SANITATION DISTRICT,
NAPA-AMERICAN CANYON WASTEWATER MANAGEMENT AUTHORITY, AND
NAPA SANITATION DISTRICT RECLAIMED WATER USERS
(DUANE CHAMBERLAIN, PHYLLIS FIFIELD, EARL HUSTON,
CHARDONNAY GOLF CLUB, INC., ET AL),
IN NAPA COUNTY

ORDER NO. 91 - 093

SELF-MONITORING PROGRAM

NAPA SANITATION DISTRICT AND NAPA SANITATION DISTRICT RECLAIMED WATER USERS

I. GENERAL

Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13268, 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No. 73-16.

The principle purposes of a monitoring program by a waste discharger or reclaimed water producer or user, also referred to as a self-monitoring program, are:

- A. To document compliance with waste discharge requirements and prohibitions established by this Regional Board; and
- B. To facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge or water reclamation.

II. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage, and analyses shall be performed according to Code of Federal Regulations Title 40, Section 136 (40 CFR S136), or other methods approved and specified by the Executive Officer of this Regional Board.

Water and waste analyses shall be performed by a laboratory approved for these analyses by the State Department of Health Services (DOHS), or a laboratory waived by the Executive Officer from obtaining a DOHS certification for these analyses.

The director of the laboratory whose name appears on the certification, or his/her laboratory supervisor who is directly responsible for the analytical work performed shall supervise all analytical work including appropriate quality assurance/quality control procedures in his/her laboratory and shall sign all reports of such work submitted to the Regional Board.

All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

III. DEFINITION OF TERMS

A. SAMPLES

1. A grab sample is an individual sample collected in a short period of time not exceeding 15 minutes. Grab samples represent only conditions existant at the time of sample collection. Grab samples are used primarily in determining compliance with daily or instantaneous maximum limits.
2. A flow sample is the accurate measurement of the average flow volume over a given period of time, using a properly calibrated and maintained flow measuring device. Flows calculated from properly maintained pump useage records for an accuratley calibrated pump are acceptable.
3. A composite sample is a sample composed of individual grab samples taken from a single sampling location, mixed in proportions to the instantaneous rate of waste flow corresponding to each grab sample (with proportions varying by not more than plus or minus five percent from the instantaneous rate), and collected at regular intervals not greater than one hour, or collected by the use of continuous automatic sampling devices capable of attaining the proportional accuracy stipulated above throughout the sampling period (eg 24 hours).
4. Freeboard is the vertical distance between the water surface and the lowest elevation of the top of the water containment structure (perimeter dike, levee, berm, etc.).

B. STANDARD OBSERVATIONS

1. Reclaimed Water Use Areas

- (a) Evidence of reclaimed water escaping the reclaimed water use area through surface runoff or airborne spray (Show affected area on a sketch).
- (b) Nuisance Odor from Use Area: If present, indicate apparent cause, characterization, direction of travel, and any public use area or off-site facility affected.
- (c) Evidence of prolonged ponding of reclaimed water, or of mosquitoes breeding within the use area due to ponding.
- (d) Warning signs properly posted to inform public that water being used for irrigation is reclaimed water which is not safe for drinking or contact.
- (e) Evidence of reclaimed water sprayed on vehicles, buildings, domestic water facilities, food handling facilities, or surface waterways.

2. Reclaimed Water Storage Pond Areas

- (a) For each storage pond, measure and report the freeboard at the lowest elevation point of the perimeter levee.
- (b) Evidence of seepage from the pond (Show affected area on a sketch, and estimate volume lost.)
- (c) Nuisance Odor from pond: If present, indicate apparent cause, characterization, direction of travel, and any public use area or off-site facility affected.
- (d) Warning signs properly posted to inform public that pond contains reclaimed water which is not safe for drinking or contact.

3. Overflows and Bypasses

- (a) Location of overflow or bypass, and description of any surface water or land area affected (show on map or sketch of area).
- (b) Date and time when overflow or bypass started, and when overflow or bypass ceased.
- (c) Estimated total volume discharged, or flow rate and duration of event.
- (d) Explanation of cause, and corrective actions taken.

IV. DESCRIPTION OF SAMPLING AND OBSERVATION STATIONS

NOTE: A sketch showing locations of all stations described below shall accompany the first monitoring report, and subsequent reports when locations are changed or a violation is reported.

A. RECLAIMED WATER TREATMENT AND DISTRIBUTION FACILITIES (PRODUCER)

<u>Station</u>	<u>Description</u>
1. <u>TREATMENT PLANT EFFLUENT</u>	
E-1	Located at any point in the effluent from the Soscol Treatment Plant where all waste tributary to the reclaimed water distribution system is present, prior to being distributed to users. (NOTE: May be the same as E-1-D)
E-1-D	Located at any point in the effluent from the Soscol Treatment Plant disinfection facilities at which point adequate contact with the disinfectant is assured.

2. OXIDATION POND EFFLUENT

E-2 Located at a point in the effluent from Soscol Oxidation Pond #2 prior to distribution to the Napa County Airport/Fagundes Ranch reclaimed water user area.

3. RECLAIMED WATER DISTRIBUTION SYSTEM

RD - 1 Located at a point in the distribution system
through for each reclaimed water use area, suitable
RD - 'n' for measuring the total flow of reclaimed
water distributed to the use area.

B. RECLAIMED WATER USE AREAS (USER)

<u>Station</u>	<u>Description</u>
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1. USE AREA PERIMETER

UP - 1 through UP - 'n'	Points located at about 1000 foot intervals around the perimeter of each reclaimed water use area.
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2. CHARDONNAY GOLF CLUB STORAGE POND WATER

SW 3, SW 4, & SW 5	In each storage pond, within one foot of the water surface, and no less than two feet from the bank, representative of the pond water. (SW 3 = Lake 3; SW 4 = Lake 4; SW 5 = Lake 5)
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3. CHARDONNAY GOLF CLUB STORAGE POND PERIMETER

SP - 1 through SP - 'n'	Points located at the mid-points of the perimeter levees around each storage pond.
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C. OVERFLOWS AND BYPASSES (PRODUCER OR USER)

OV - 'n'	Any point in the treatment, distribution, storage or use area facilities where an overflow or bypass occurs (eg manholes, pipes, valves, pumps, ponds, etc.).
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V. SCHEDULE OF SAMPLING, MEASUREMENTS, AND ANALYSES

A. The Producer and User of the reclaimed water are required to perform observations, sampling, measurements and analyses according to the schedule given in Table 1 and Table 1 Footnotes (Attachment A).

B. This Self-Monitoring Program is applicable during any period when reclaimed water is distributed to any reclaimed water storage pond, or used at any reclaimed water use area.

VI. REPORTS TO BE FILED WITH THE REGIONAL BOARD

A. Self-Monitoring Reports

Written reports shall be filed regularly for each calendar month during any month when reclaimed water is produced, distributed or used. Reports shall be submitted to this Regional Board's office no later than the fifteenth day of the following month, and shall include the following:

1. Letter of Transmittal

The letter of transmittal shall include the following:

- o The Discharger's name, address, phone number and contact person(s);
- o The monitoring period being reported, by month and year;
- o The name of the responsible Regional Board staff member;
- o Discussion of all requirement violations found during the monitoring period, including the causes of the violations and corrective actions taken or planned in order to prevent future violations (References to reports previously submitted describing corrective actions and/or implementation schedules are acceptable.); and
- o When applicable, discussion of any special or unusual events pertinent to maintaining compliance with waste discharge requirements, such as failure, repair, replacement or installation of major equipment, or significant operational changes or improvements.

The transmittal letter shall contain a statement by the Discharger, or the Discharger's authorized agent, under penalty of perjury, that to the best of the signer's knowledge the report is true, accurate and complete.

2. Results of Analyses and Observations

- o Tabulations of the results from all required measurements and analyses specified in Table 1 and Table 1 Footnotes (Attachment A) by date, time, sample type and station.
- o Reclaimed Water User's Report (Attachment B) for each use area, and Reclaimed Water Storage Pond Report (Attachment C) for each storage pond (or equivalent reports of required measurements and observations).
- o Report of any required observations not included in the above reports, and any additional sampling, measurements or analyses conducted characterizing the reclaimed water.

B. Report of Permit Violation

In the event the Discharger violates, or threatens to violate the conditions of the waste discharge requirements and prohibitions due to:

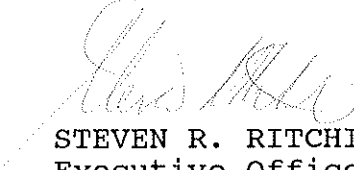
1. Maintenance work, power failure, or breakdown of wastewater transport or treatment equipment;

2. Accidents caused by human error or negligence; or
3. Other causes such as acts of nature,

the Discharger shall notify the Regional Board office by telephone as soon as the Discharger or the Discharger's agents have knowledge of the incident. A written report shall be submitted within two weeks of the noncompliance event, unless directed otherwise by Regional Board staff. The written report shall include a description of the event, results of any sampling conducted during the event, an explanation of the reasons for noncompliance, actions taken to correct the problem and the dates thereof, and actions being taken to prevent the problem from recurring.

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in the Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 91-093.
2. Is effective on the date shown below.
3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.


STEVEN R. RITCHIE
Executive Officer

Effective Date 6/12/91

Attachments:

- A. Table 1 - Schedule for Sampling, Measurements and Analyses;
and Table 1 Footnotes
- B. Reclaimed Water User's Report
- C. Reclaimed Water Storage Pond Report

[File No. 2139.3009]
[Originator/BDA]
[Reviewer/RJC]

TABLE 1
SCHEDULE FOR SAMPLING, MEASUREMENTS AND ANALYSES (1)

(NAPA SANITATION DISTRICT WASTEWATER RECLAMATION PROJECT)

SAMPLING STATIONS -->	Foot note	E-1		E-1-D	E-2	All RD	All SW	All UP & SP	All OV
Type of Sample -->		Flow	G	G	Flow	Flow	G	O	O
Parameter (units)		C-24			G				
Flow Rate (MGD or gpd)	(2)	Cont			Cont	Cont			E
Flow Volume (gallons)	(2)	M			M	M			E
BOD, 5-day (mg/l)		3/W			3/W				
Total Suspended Solids (mg/l)		3/W							
Oil and Grease (mg/l)	(3)		M						
Chlorine Residual and Dosage (mg/l) & (kg/d)	(4)			Cont					
pH (units)			D		W		2W		
Dissolved Oxygen (mg/l)			D		W		2W		
Dissolved Sulfide(mg/l)	(5)		D		W		2W		
Total Coliform (MPN/100 ml)				D					
Ammonia Nitrogen (mg/l)		M			M				
Nitrate Nitrogen (mg/l)		M			M				
Total Kjeldahl N (mg/l)		M			M				
Total Phosphate (mg/l)		M			M				
All Applicable Standard Observations	(6)							W	E

LEGEND:

Type of Sample

Flow = Flow measurement
C-24 = 24-hour composite
G = Grab sample
O = Observations

Sampling Frequency

Cont = Continuous
M = Monthly
2W = Once every two weeks
W = Weekly
3/W = Three days per week
D = Daily
E = Each event

TABLE 1 FOOTNOTES

- (1) This Self-Monitoring Program is applicable during any period when reclaimed water is distributed to any reclaimed water storage pond, or used at any reclaimed water use area.
- (2) Flow Rate and Volume: Continuous measurement. Report on a daily basis, flow rate in million gallons per day (MGD) or gallons per day (gpd). Report on a monthly basis, the total monthly flow in million gallons (MG) or gallons.
- (3) Oil & Grease: Each sampling shall consist of three grab samples taken at equal intervals during the sampling day, with each grab sample being collected in separate glass containers and analyzed separately. Report results as the weighted average of the three values, with weighting based upon the instantaneous flow rates occurring at the time of each grab sample.
- (4) (a) Chlorine Residual: Continuous or Hourly monitoring. Report on a daily basis, average concentration (mg/l) of residual after adequate contact time has been assured.

(b) Chlorine Dosage: Report on a daily basis, average concentration (mg/l), and total loading (kg/d).
- (5) Dissolved Sulfides: Analysis required only when Dissolved Oxygen is less than 2.0 mg/l.
- (6) Observations must be made while reclaimed water is being used. Users (or designated agent) shall conduct, at the frequency indicated in Table 1, the Standard Observations defined in Part III.B. of this Self-Monitoring Program.

Users (or designated agent) shall submit to the Producer for each month when reclaimed water is distributed or used, a Reclaimed Water User's Report for each use area, and a Reclaimed Water Storage Pond Report for each storage pond (or equivalent reports). The Producer shall then include these reports as part of the monthly Self-Monitoring Report.

ATTACHMENT B RECLAIMED WATER USER'S REPORT
(Order No. 91-093)

1. Name of User: _____
2. Reporting Period (Month/Year): _____
3. Circle dates when reclaimed water was used: 1 2 3 4 5 6 7 8 9 10
11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
4. Total Monthly Flow used (gallons): _____
5. Required Standard Observations (As defined in SMP Part III.B.):
[For each inspection, record date, time, and 'yes' or 'no'
for each observation, according to observed conditions.]

Inspection Date and Time:					
Observation Stations Inspected:					
Escape of Reclaimed Water from Site					
Nuisance Odors from Reclaimed Water					
Prolonged Ponding of Reclaimed Water					
Mosquito Breeding					
Warning Signs <u>Not</u> Properly Posted					
Spray on Waterways, Vehicles, etc.					

If any of the above observations were yes, a written report containing the following information shall be submitted:

- Show location of violation on a sketch of the site.
- Explain cause and extent of violation.
- Describe corrective actions taken, date(s) compliance was achieved, and date/time reclaimed water use resumed.

6. I certify that the information in this report, to the best of my knowledge, is true and correct.

Signature of User Supervisor

Date

NOTE: For use areas with reclaimed water storage ponds, a Reclaimed Water Storage Pond Report (Attachment C) must also be completed for each pond.

ATTACHMENT C RECLAIMED WATER STORAGE POND REPORT
(Order No. 91-093)

1. Name of User: _____
2. Name of Storage Pond: _____
3. Reporting Period (Month/Year): _____
4. Total Monthly Flow into Pond (gallons): _____
5. Total Monthly Flow out of Pond (gallons): _____
6. Required Standard Observations (as defined in SMP Part III.B.):
[For each inspection, record date, time, pond freeboard, and
'yes' or 'no' for other observations, according to conditions.]

Inspection Date and Time: ---->					
Freeboard (feet):					
Observation Stations Inspected:					
Evidence of Seepage from Storage Pond *					
Nuisance Odors from Storage Pond *					
Warning Signs <u>Not</u> Properly Posted *					
POND WATER ANALYSES					
pH (units)					
Dissolved Oxygen (mg/l)					
Dissolved Sulfides (mg/l) [If D.O. <2.0 mg/l]					

- * If any observations were yes, indicating a violation, a written report containing the following information shall be submitted:
- a. Show location of violation on a sketch of the site.
 - b. Explain cause and extent of violation.
 - c. Describe corrective actions taken, date(s) compliance was achieved, and date/time regular pond use was resumed.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Signature of User Supervisor

Date